Amendments to the Claims:

1. (Original) Meter electronics (120) for a flow measurement apparatus having a processing system for correcting flow information generated by said flow measurement apparatus; said meter electronics (120) comprising:

instructions for directing said processing system to:

sample a signal representing flow information generated by said flow measurement apparatus during a zero flow state of said flow measurement apparatus to define a plurality of data points representing said signal;

establish deviation limits for at least one of said data points;

determine whether each sampled data point is within said deviation limits;

sample a data point within said deviation limits to define spurious flow information for said zero flow state;

sample a data point outside of said deviation limits to define information representing a true material flow of said flow measurement apparatus;

continue said sampling of said data points as long as said sampled data points are within said deviation limits;

prevent said spurious flow information from being applied as to an output of said flow measurement apparatus during the sampling of data points within deviation limits;

determine that the most recently sampled data point is outside of said deviation limits and thereby represents information for a true material flow of said flow measurement apparatus; and

generate an output signal representing said true material flow information represented by said most recently sampled data point.

2. (Original) The meter electronics (120) of claim 1 characterized in that said flow measurement apparatus defines a Coriolis flowmeter.

3. (Currently Amended) The meter electronics (120) of claim**[[s]]** 1 **[[or 2]]** characterized in that said processing system is configured to execute the further instructions of:

specify a low flow cutoff limit representing a material flow below which said flow measurement apparatus will not generate an output signal representing a true material flow;

monitor the material flow information represented by said output signal;

determine that said monitored material flow information becomes less than the material flow represented by said low flow cutoff limit;

terminate the generation of said output signal; and

resume the sampling of the said data points for said zero flow state of said flow measurement apparatus.

4. (Original) The meter electronics (120) of claim 3 characterized in that said processing system is configured to execute the further instructions of:

determine that a newly sampled data point represents a material flow that is outside of said deviation limits; and

generate an output signal for the true material flow represented by said newly sampled data point.

5. (Original) The meter electronics (120) of claim 1 characterized in that said processing system is configured to execute the further instructions of:

establish said deviation limits by the step of establishing an upper limit and a lower limit of deviation associated with each sampled data point;

sample said data points as long as the spurious material flow information represented by said data point is between said upper deviation limit and said lower deviation limit;

determine that a newly sampled data point falls outside of said limits;

determine the true material flow information represented by said sampled data point; and

generate an output signal representing said determined flow information.

6. (Currently Amended) The meter electronics (120) of claim**[[s]]** 1**[[-5]]** characterized in that said processing system is configured to execute the further instructions of:

determine the average μ of the flow rates of the N previously sampled data points;

establish said standard deviation limits of the previous N data points by multiplying the product of the standard deviation *r* by a user specified number standard deviations *A* away from said average of the deviations; and

add and subtract the product of *rA* with respect to μ.

7. (Currently Amended) The meter electronics (120) of claim**[[s]]** 1 **[[or 2]]** characterized in that said processing system is configured to execute the further instructions of:

derive an expression to define data points characterizing the parameters of time delay Δt and input power of said flow measurement apparatus during a low flow state of said flow measurement apparatus;

derive an expression to define data points characterizing the parameters of Δt and input power of said flow measurement apparatus during a zero flow state of said flow measurement apparatus; and

subtract said defined expression for said zero flow state from said expression for said low flow state to obtain an output signal for said flow measurement apparatus that is devoid of the spurious errors induced in said apparatus during said zero flow state.

8. (Original) The meter electronics (120) of claim 3 characterized in that said processing system is configured to execute the further instructions of:

use a relationship between time delay Δt and input power of said flow measurement apparatus to derive an expression representing a plurality of said data points characterizing the generation of flow information by said flow measurement apparatus during said zero flow state.

9. (Original) The meter electronics (120) of claim 8 characterized in that said processing system is configured to execute the further instructions of:

determine the deviation between subsequently sampled data points and said expression; and

use said deviation determination to detect the end of said zero flow state.

10. (Original) The meter electronics (120) of claim 8 characterized in that said processing system is configured to execute the further instructions of:

derive said expression by sampling said data points; and

use “n” of said data points in a curve fitting operation to derive said expression.

11. (Original) The meter electronics (120) of claim 10 characterized in that said processing system is configured to execute the further instructions of:

sample the remainder “m” of said sampled data points;

determine the deviation between each of said “m” sampled data points and said expression; and

use said deviation determination to determine the operational state of said flow measurement apparatus.

12. (Original) The meter electronics (120) of claim 9 characterized in that said processing system is configured to execute the further instructions of:

derive a plurality of said expressions for said zero flow state;

store said plurality of derived expressions in a memory;

define consistency information;

compare a newly derived expression with said stored expressions;

determine whether said newly derived expression is consistent with said stored expressions;

use said newly defined expression if it is determined to be consistent with said stored expressions; and

preclude the use of said newly defined expression if it is determined to be inconsistent with said stored expressions.

13. (Original) Meter electronics (120) for a flow measurement apparatus having a processing system for correcting flow information generated by said flow measurement apparatus; said meter electronics (120) comprising:

instructions for directing said processing system to:

derive an expression to define data points for a signal characterizing the parameters of time delay Δt and input power of said flow measurement apparatus during a zero flow state of said flow measurement apparatus;

derive an expression to define data points characterizing the parameters of time delay Δt and input power of said flow measurement apparatus during a low flow state of said flow measurement apparatus;

subtract said expression for a zero flow state of said flow measurement apparatus from said expression for said low flow state to obtain an output signal devoid of the errors induced during said zero flow state.

14. (Original) A method of operating a flow measurement apparatus for correcting flow information generated by said flow measurement apparatus, said method comprising the steps of:

sampling a signal representing flow information generated by said flow measurement apparatus during a zero flow state of said flow measurement apparatus to define a plurality of data points representing said signal;

establishing deviation limits for at least some of said data points;

determining whether each sampled data point is within said deviation limits;

sampling a data point within said deviation limits to define spurious flow information for said zero flow state;

sampling a data point outside of said deviation limits to define information representing a true material flow of said flow measurement apparatus;

continuing said sampling of said data points as long as said sampled data points are within said deviation limits;

preventing said spurious flow information from being applied as to an output of said flow measurement apparatus during the sampling of data points within deviation limits;

determining that the most recently sampled data point is outside of said deviation limits and thereby represents information for a true material flow of said flow measurement apparatus; and

generating an output signal representing said true material flow information represented by said most recently sampled data point.